



THE VOICE
FROM WAY
DOWN EAST



E. H. Green

The background of the cover features a faint, light-colored illustration. On the left, there are stylized clouds and a building. On the right, a tall, lattice-structured radio tower rises vertically. At the bottom, a large, multi-story building with many windows is depicted.

THE VOICE FROM WAY DOWN EAST

Radio Broadcasting Station

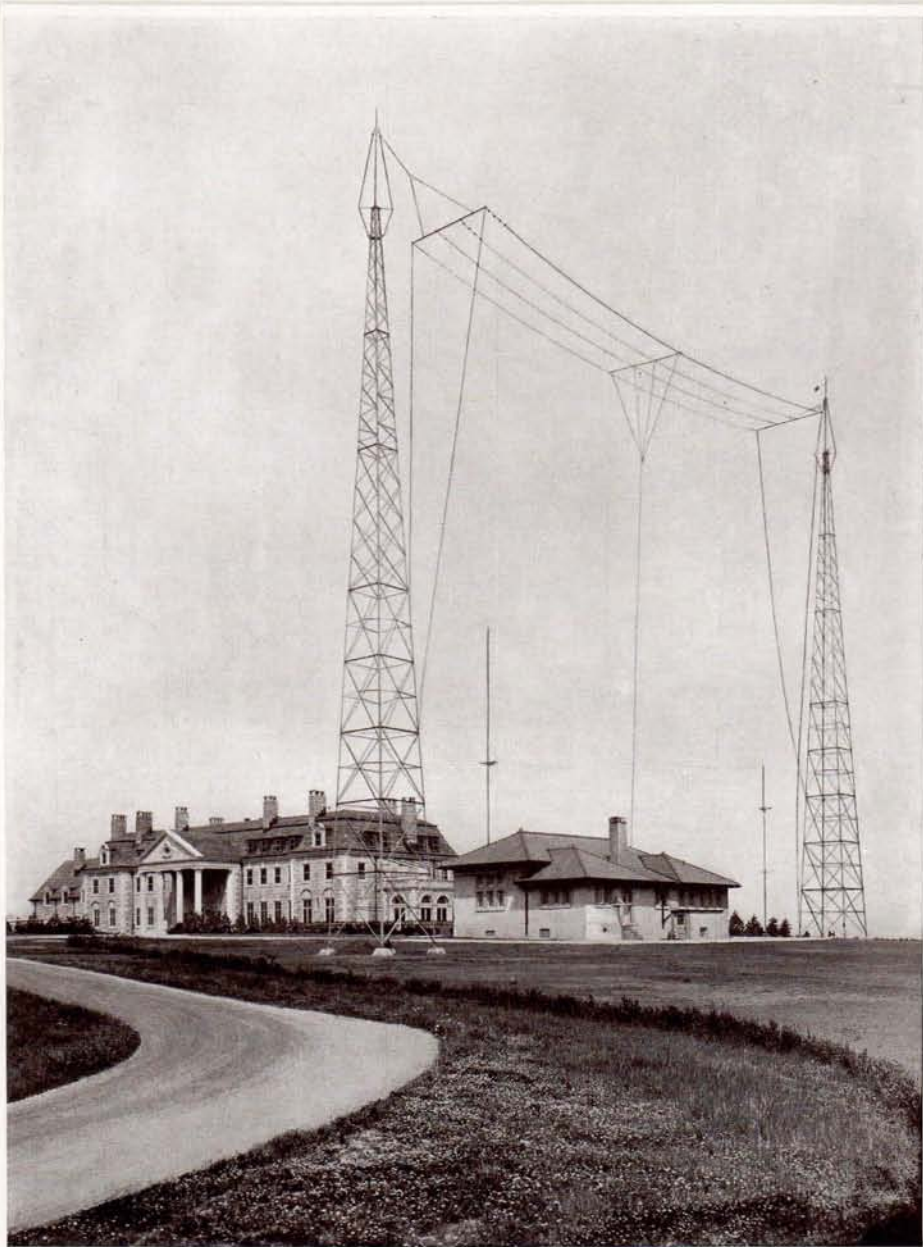
W M A F

Round Hills Radio Corporation

South Dartmouth

Massachusetts

1923



Round Hills House and W M A F

*Here, where sky and sea have long played hosts
to the Four Winds, has arrived a new guest.
Borne on wings of light, yet unseen; unheard,
yet bearing tidings to all mankind—the Radio!*

THE VOICE *from* WAY DOWN EAST

By

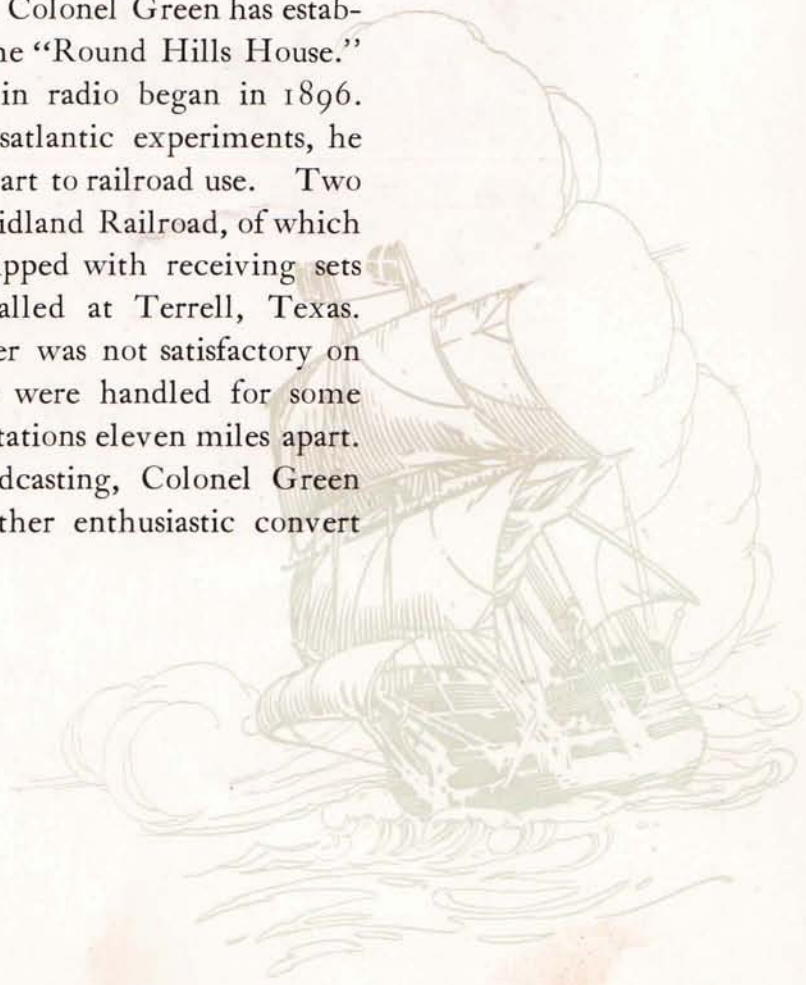
PAUL B. FINDLEY

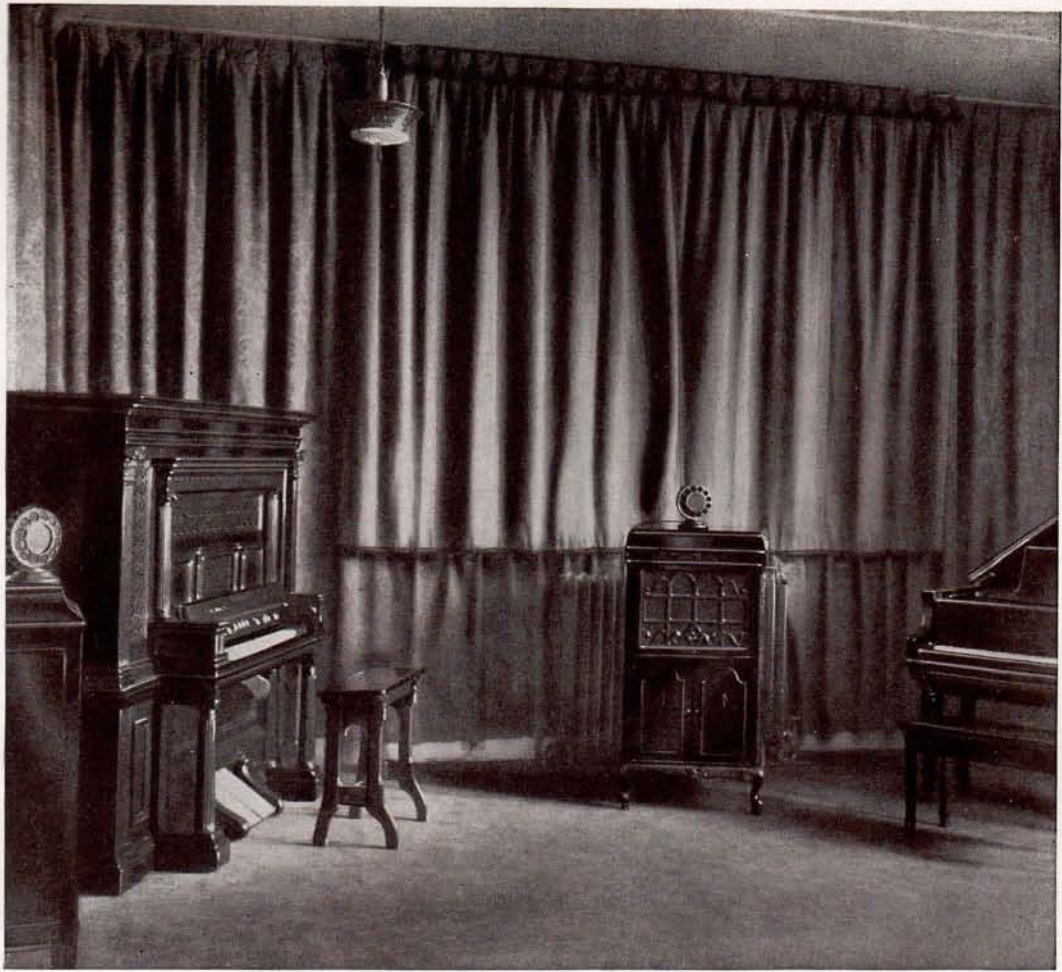


WHEN the Mayflower landed at Plymouth on December 21, 1620, she had as cabin-boy a lad named John Howland. Five years later, having come to man's estate, young Howland was allotted a tract of land on the west side of Buzzards Bay, running from the site of the present city of New Bedford to the open sea. At the southern end of this great tract was a rocky point whose two rounded hillocks were a landmark to sailors. Eventually this portion of the tract was known as Round Hills Farm, and as such it has remained within the Howland family continuously, its present owner being Edward Howland Robinson Green. Within recent years Colonel Green has established there his summer home "Round Hills House."

Colonel Green's interest in radio began in 1896. Learning of Marconi's transatlantic experiments, he attempted to adapt the new art to railroad use. Two baggage cars of the Texas Midland Railroad, of which he was President, were equipped with receiving sets and a sending set was installed at Terrell, Texas. The old metal-filings coherer was not satisfactory on a moving train but messages were handled for some months between two fixed stations eleven miles apart.

To radio telephone broadcasting, Colonel Green was introduced as many another enthusiastic convert





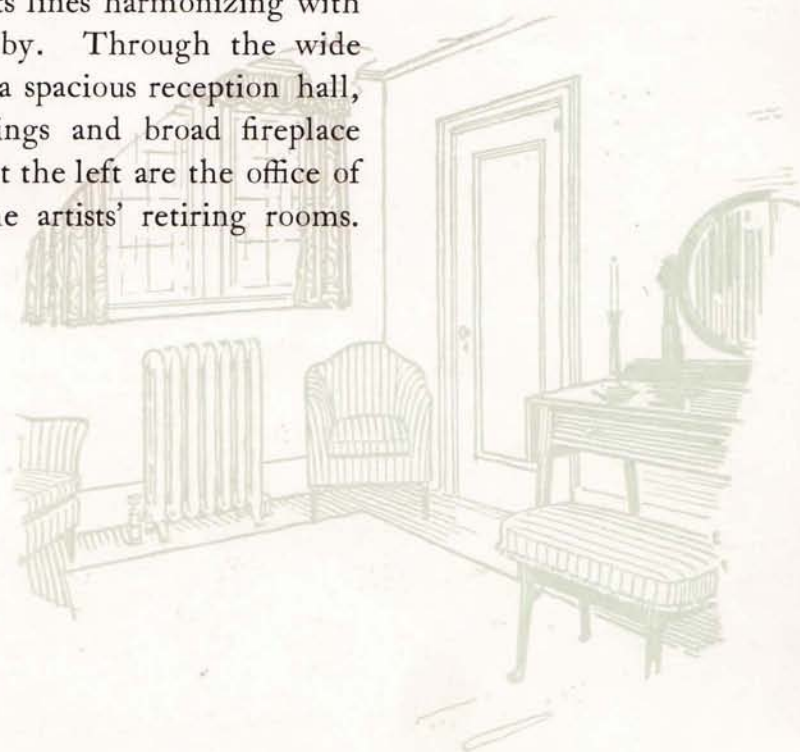
The beautiful surroundings and architecture of W M A F find their culmination in the studio, where blue-and-silver hangings and soft lighting are an effective background for lyric art



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has been. Confined by illness at Dallas, one of his old-time associates on the Texas Midland brought him a receiving set and showed him how to operate it. Listening to the programs from various stations, Colonel Green at once perceived the great possibilities of this new means for taking entertainment and instruction into every home, no matter how remote. This revived his old enthusiasm for radio communication. To lay a sound foundation for whatever might come, he formed the Round Hills Radio Corporation in whose name all the subsequent negotiations were conducted. Within a few weeks a Western Electric 100-watt broadcasting set was set up at Round Hills as Station No. 1, and work was under way on a substantial building to house the 500-watt set of station No. 2. During the summer occasional testing programs were given and reports of reception as far away as England, Porto Rico, Honduras and Texas were received.

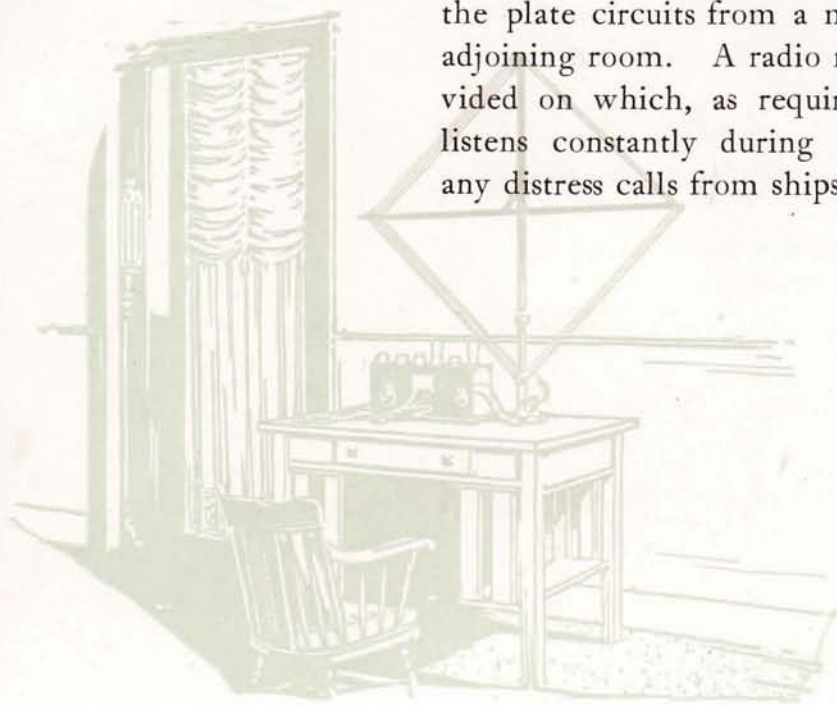
To the design of the building for Station No. 2 the Western Electric Company's experience with many broadcasting stations was applied. The structure itself is of tile and stucco, its lines harmonizing with Round Hills House close by. Through the wide front doors one enters first a spacious reception hall, whose comfortable furnishings and broad fireplace make one feel at home. At the left are the office of the station manager and the artists' retiring rooms.



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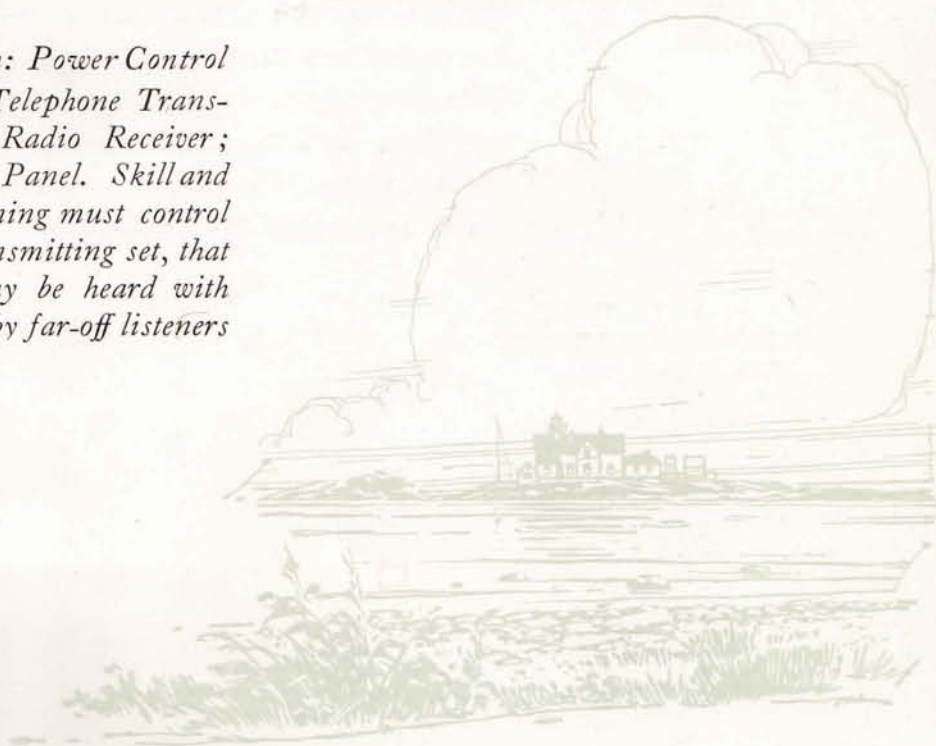
At the right, glass doorways lead to the studio where local programs are produced. Blue-and-silver brocade is hung loosely about the walls, so that reverberations may be damped to just the right degree. Deep chairs and a great davenport suggest that relaxation in which a performer can give the freest expression of personality.

From the main hall or the studio one enters the apparatus room, where stands the Western Electric 500-watt radio telephone transmitter. From the microphone in the studio tiny electric currents bearing the impress of the speaker's voice go through four stages of amplification and thence to the twin modulator tubes. Here they control the output of two oscillator tubes, thus sending out to the antenna a high frequency current whose strength is a faithful copy of the vibrations of the speaker's voice. The antenna itself, whence the ether waves are radiated, is swung from two graceful steel towers 143 feet high. It consists of four wires, having a flat top 115 feet long with lead-in wires falling 140 feet vertically to the transmitting apparatus. Power is furnished to the set at 14 volts for the tube filaments and at 1600 volts for the plate circuits from a motor-generator set in an adjoining room. A radio receiving set is also provided on which, as required by law, an operator listens constantly during transmission to pick up any distress calls from ships at sea.





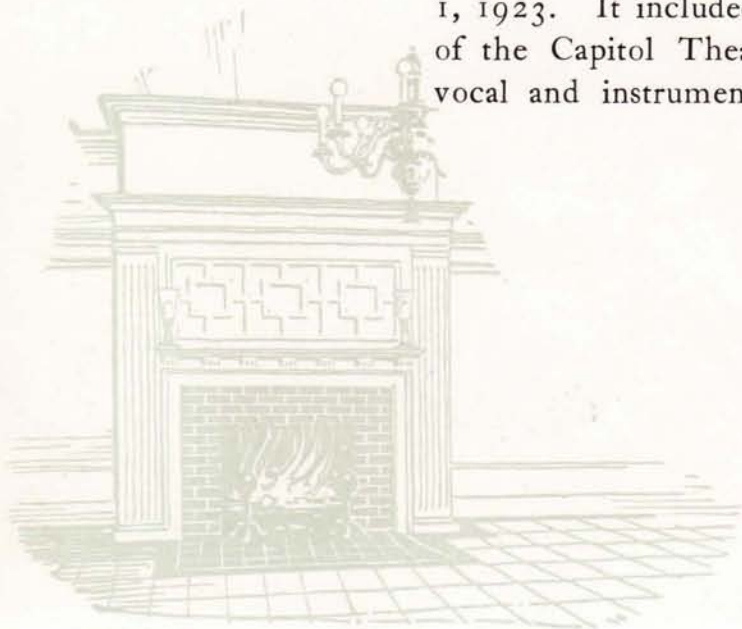
The Apparatus Room: Power Control Switchboard; Radio Telephone Transmitter; Monitoring Radio Receiver; Radio Volume Control Panel. Skill and quickness of long training must control W M A F's radio transmitting set, that music and speech may be heard with undistorted clearness by far-off listeners

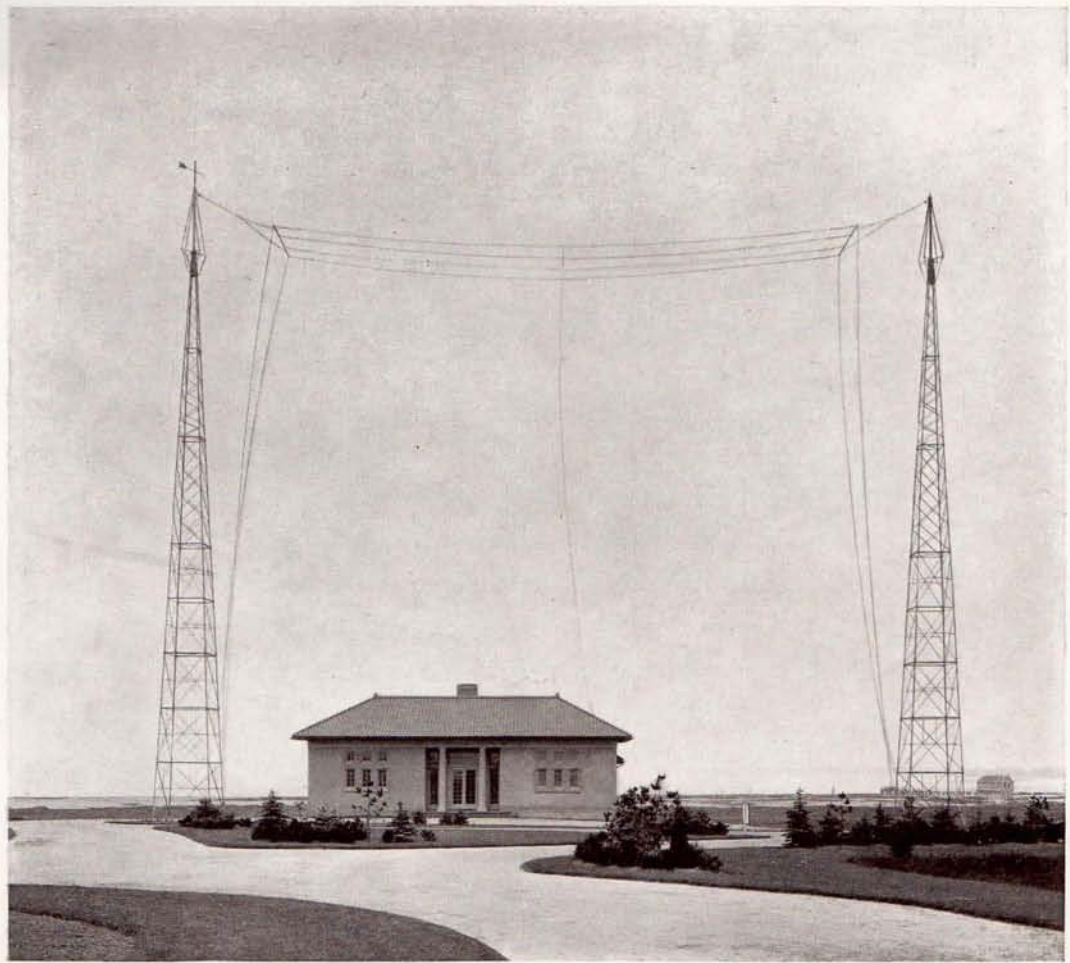


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When a program is to be produced locally, power is thrown on the set and the wave-length and antenna current are checked. A green lamp in the studio notifies the announcer that all is ready. He presses a button which makes the final connection from the microphone, and then introduces the performer to the invisible audience. During the program the control operator listens constantly through a head set or a loud speaker to what is being transmitted, and adjusts the degree of amplification so as to fully load, but not overload, the transmitter.

Intent on giving his audience the best of programs, Colonel Green was at first confronted with the difficulty of bringing his singers and musicians to a place so remote from any musical center. Then the successful demonstrations by the Bell System of the use of wire telephony as an adjunct to radio broadcasting suggested a novel solution. Arrangements were made with the American Telephone and Telegraph Company to transmit, over its telephone lines to Round Hills, the programs rendered for its station W E A F in New York. At Round Hills the speech and music control W M A F'S transmitter just as if the performers were in the adjoining studio. The first program was transmitted on the evening of July 1, 1923. It included the opening musical numbers of the Capitol Theatre, New York City; special vocal and instrumental selections by staff artists of





*Two slender towers bear aloft the an-
tenna, from whose bronze strands swift
winged ether-waves take their flight*

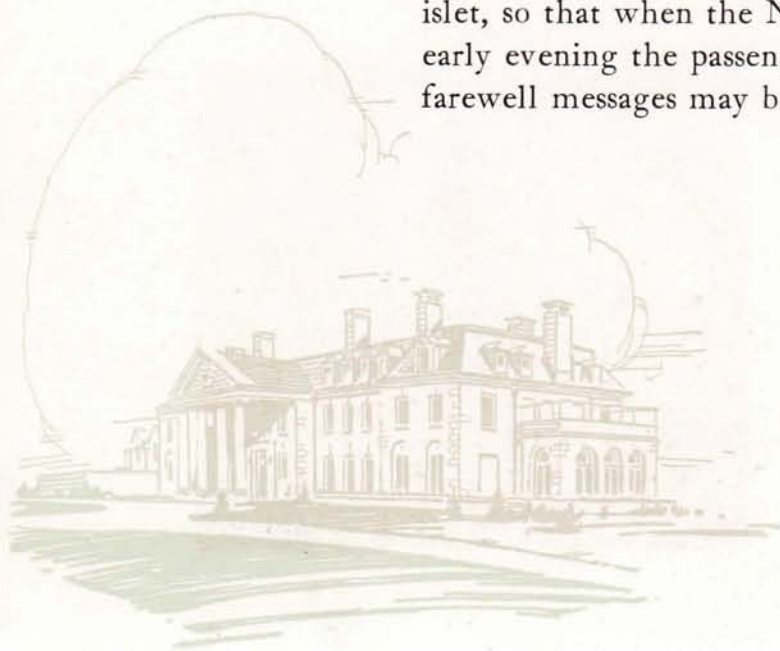


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that theatre; and a recital from the studio of the Skinner Organ Company. Thus Colonel Green has in effect transported the musical center of America to his radio audience.

The transmitter in the New York studio controls a five-stage vacuum tube amplifier, which in turn feeds into a telephone line to Hartford, Connecticut. Here the feeble currents are amplified and sent on to Providence, Rhode Island, and New Bedford, Massachusetts, at each of which points they are again amplified. At Round Hills are four more stages of amplification, making a total of fifteen. Were the energy of a 50-watt lamp increased in this proportion, its light would rival that of the sun itself.

To make these excellent programs available to his guests, Colonel Green has installed on the top of a water tower a group of loud speaking sound projectors connected to another amplifier, the whole being known as a Western Electric public address system. Near the water tower is ample parking space for automobiles and Colonel Green has invited his neighbors to drive in and listen to the programs, which will be clearly audible for a half mile or more. Plans are under way for the installation of additional projectors at Round Hills Light, a rocky islet, so that when the New York boat passes in the early evening the passengers may be entertained and farewell messages may be given to departing guests.

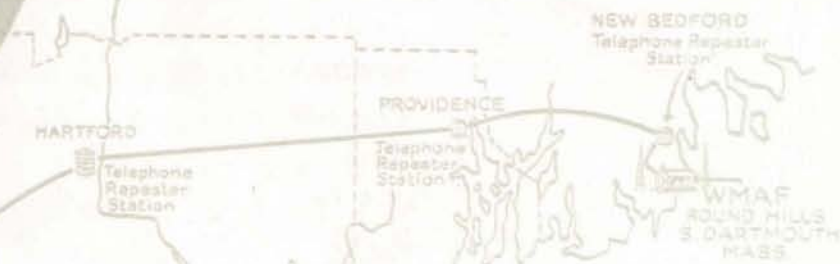




The Studio in New York



*Entrance Hall
at WMAF*



Rest Room, WMAF



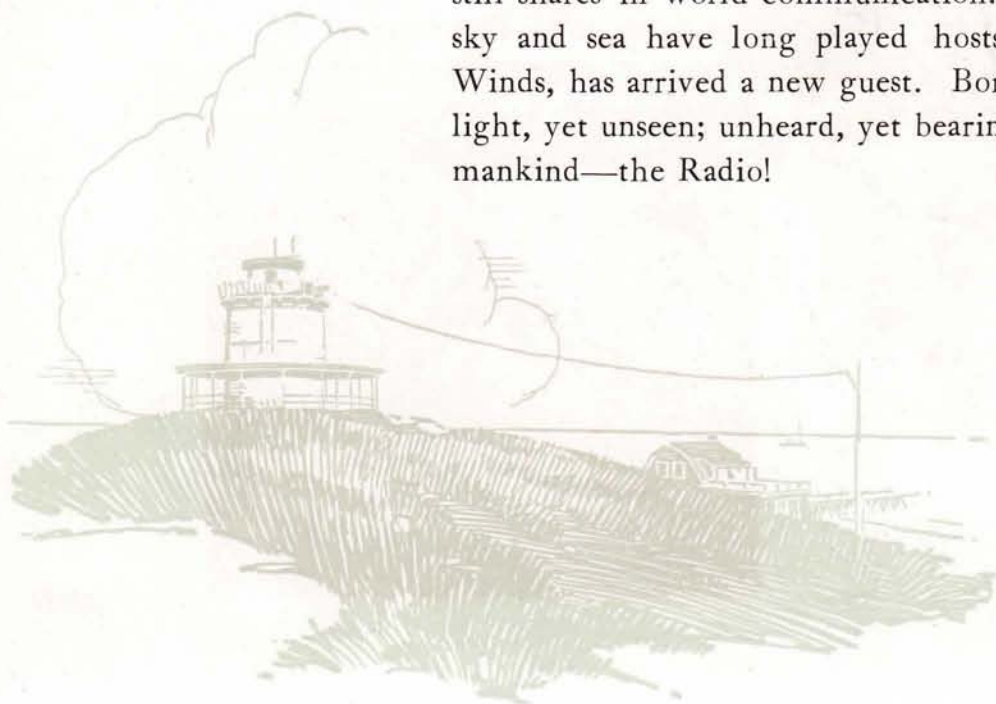
WEAF
185 BROADWAY
NEW YORK CITY

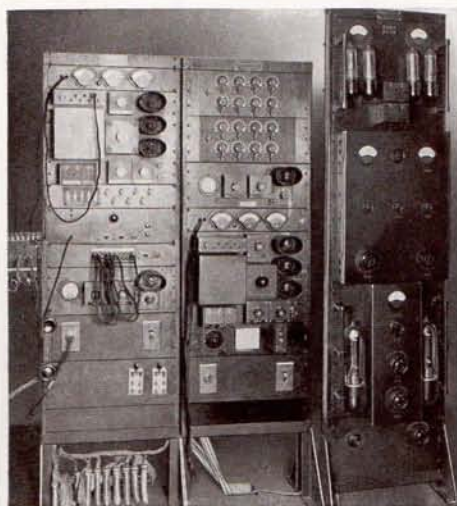
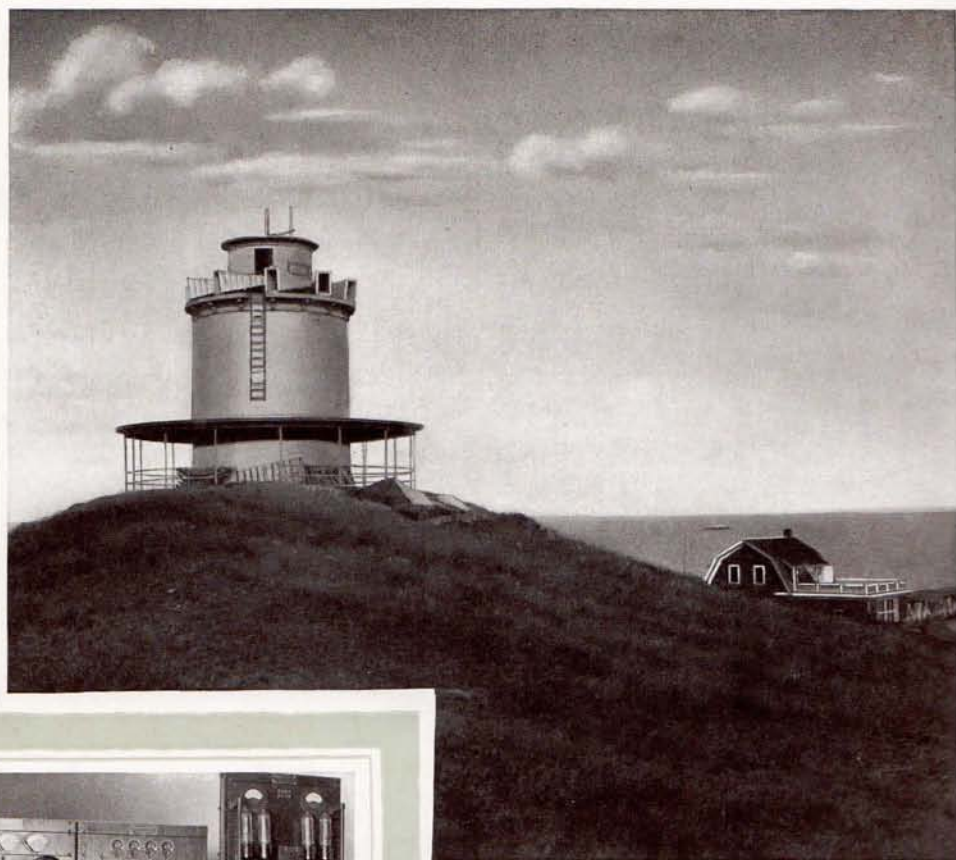
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With the arrival of its big brother, the 100-watt set of Station No. 1 will still render programs, but at less frequent intervals. It will be used to broadcast the work of local artists, and to transmit market and weather reports, local news, etc.

Colonel Green's interest in radio extends to research work such as direction finding, for which he is installing a radio compass station, and the investigation of new types of receiving circuits. For this work he has erected a number of buildings with shop facilities which will be available to qualified experimenters.

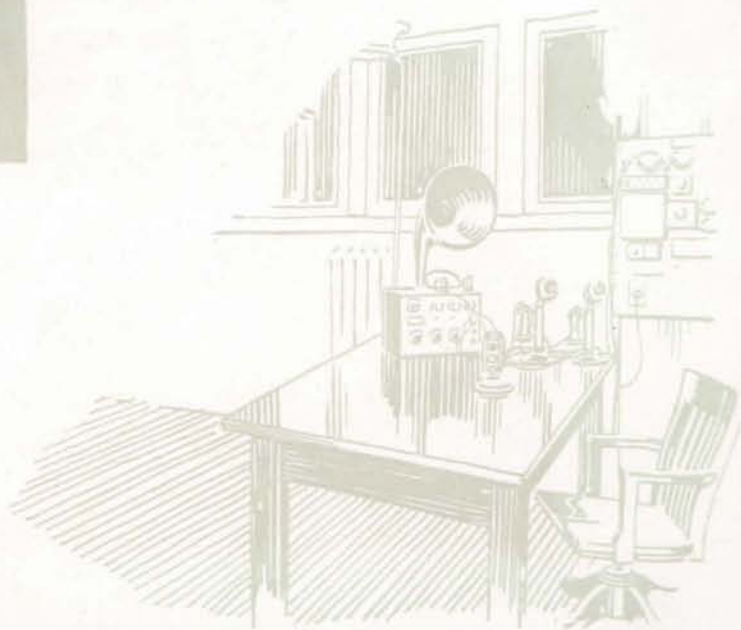
It is fitting that Round Hills should be the home of a great radio station. In olden days the Master of Round Hills watched his own ships bearing cargoes of all lands to and from the port of New Bedford. Cargoes now arrive at Round Hills House—cargoes of good-will from radio listeners to W M A F'S programs. As he reads these letters from lonely farms and frontier camps, from ships at sea, from those isolated by sickness, from his brother radio-fans, the Colonel is glad that Round Hills still shares in world-communication. Here, where sky and sea have long played hosts to the Four Winds, has arrived a new guest. Borne on wings of light, yet unseen; unheard, yet bearing tidings to all mankind—the Radio!





Through the loud-speaking projectors on the tower an audience scattered over a half-mile radius can hear the programs clearly

Vacuum tubes on the two panels at the right will amplify a speaker's voice ten thousand times



The following personnel of the Round Hills Radio Corporation and of the Western Electric Company and the American Telephone and Telegraph Company have assisted Colonel E. H. R. Green, President, in the establishment and operation of station W M A F and its auxiliary features:

THE ROUND HILLS RADIO CORPORATION

WALTER H. MARSHALL . . .	<i>Assistant to the President</i>
ERNEST R. DUFF . . .	<i>Secretary</i>
SHIRLEY L. DAVIS . . .	<i>Chief Electrician</i>
WILLIAM BALL . . .	<i>Radio Operator</i>
ROGER K. ELLIS . . .	<i>Radio Operator</i>
ROY HULSMAN . . .	<i>Electrician</i>
FRANK GROVER . . .	<i>Electrician</i>
JOAQUIN FERREIRA . . .	<i>Electrician</i>

WESTERN ELECTRIC COMPANY

GEORGE E. CHASE, *Broadcasting Sales Engineer*, in general charge.

AUGUSTUS J. EAVES, *Engineering Department*, in charge of engineering.

HENRY S. PRICE, *Engineering Department*, radio equipment.

RICHARD E. KUEBLER, *Engineering Department*, public address equipment.

WILLIAM D. SMITH, *Engineering Department*, architecture and interior decoration of station building.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

WILLIAM E. HARKNESS, *Manager of Broadcasting*.

EDWARD R. CULLEN, *Operating Representative at W M A F*.

